



NOAA, NATIONAL WEATHER SERVICE, WEATHER FORECAST OFFICE

Miami, Florida 33165

<http://weather.gov/southflorida>

Hottest Summer on Record for Southeast Florida!

Second Hottest on Record in Naples

September 1, 2010: August was yet another month of above normal temperatures across South Florida, finishing among the top 10 warmest August periods on record (see table below for details).

The continued hot temperatures in August culminated what is the hottest summer on record for all 4 primary South Florida climate locations. The summer period is defined as the months of June, July and August.

Following are the average summer 2010 temperatures and departure from normal for the 4 sites:

- **Miami International Airport** had an average summer 2010 temperature of 85.17 degrees Fahrenheit. This is 2.0 degrees above normal, and sets the record for the all-time hottest June-August period on record for the Miami area. The previous hottest summer on record was 84.98 degrees set back in 1998. Daily maximum temperatures reached or exceeded 90 degrees on 80 days, second most for any summer period (record is 86 days in 1998). The minimum temperature did not drop below 80 on 40 days this summer, breaking the previous record of 33 days set in 1998. Temperature records in Miami go back to 1895.

- **Palm Beach International Airport** had an average summer 2010 temperature of 84.6 degrees Fahrenheit. This is 2.4 degrees above normal, and sets the record for the all-time hottest June-August period on record for the West Palm Beach area. The previous hottest summer on record was 84.2 degrees set back in 1998. Daily maximum temperatures reached or exceeded 90 degrees on 79 days, tied for the third most number of days for any summer period (record 83 days set in 1951). The minimum temperature did not drop below 80 on 25 days this summer, easily breaking the previous record of 14 days set in 2003 and 2005. Temperature records in West Palm Beach go back to 1888.

- **Fort Lauderdale/Hollywood International Airport** had an average summer 2010 temperature of 84.6 degrees Fahrenheit. This is 2.4 degrees above normal, and sets the record for the all-time hottest June-August period on record for the Fort Lauderdale area. The previous hottest summer on record was 84.57 degrees set back in 1998. Daily maximum temperatures reached or exceeded 90 degrees on 67 days, well short of the record of 84 days set back in 1924. The minimum temperature did not drop below 80 on 38 days this summer, easily breaking the previous record of 32 days set in 2006. Temperature records in Fort Lauderdale go back to 1912.

- **Naples Municipal Airport** had an average summer 2010 temperature of 84.3 degrees Fahrenheit. This is 2.6 degrees above normal, and is the second hottest June-August period on record for the Naples area, falling just short of the record hottest summer of 84.5 degrees set back in 1944. Daily maximum temperatures reached or exceeded 90 degrees on 82 days, short of the record of 90 days set back in 1944. The minimum temperature did not drop below 80 on 8 days this summer, just short of the record of 10 days set back in 2007. Temperature records in Naples go back to 1942.

The main culprit for the record-breaking heat this summer has been a very persistent high pressure area in the middle and upper levels of the atmosphere over most of the eastern half of the United States (Figure 1). High pressure aloft tends to limit the overall amount of cloud cover and allows for greater heating during the day, as well as keep temperatures warm at night due to light east winds from the warmer than normal ocean waters off the Florida coastline (Figure 2).

Highest daily maximum temperature readings this summer for the main reporting stations were as follows

- Miami: 96 on August 15 and 21.
- Fort Lauderdale: 95 on July 10.
- West Palm Beach: 96 on July 12 and 30.
- Naples: 97 on June 12.

Over interior sections, temperatures reached and exceeded the 100 degree mark during several periods this summer: June 14 and 16, July 8 through 10, July 28 through 31 and August 14 through 20. The highest unofficial temperature reading was 102 degrees at Brighton Reservation in northern Glades County on July 31.

In a year of temperature extremes from one of the coldest winters in recent memory to the hottest summer on record, it is interesting to note that the average temperature for the year across south Florida is still running a few degrees below the January-August normal.

Rainfall/Severe Weather

Most of south Florida received above normal rainfall in August (Figure 3). Areas of northern Palm Beach County and inland sections of Collier County received as much as 15 inches of rain in August, with a large area of greater than 10 inches covering most of the Everglades and parts of the metro areas along both coasts. The only area which received below normal August rainfall was extreme southern Miami-Dade County, where totals ranged anywhere from 4 to 8 inches.

A few flooding events occurred in August, mainly in Palm Beach County, but fortunately no significant impacts to property were noted.

The only significant severe weather of note in August was a tornado which moved through a 2-mile area of West Boca Raton around 6 PM on August 7th, with damage mostly to trees, fences and power lines and very minor structural damage

Below are August 2010 average temperatures and departure from normal in degrees Fahrenheit for the 4 main climate sites:

Location	Aug 2010 Average (F)	Departure From Normal	Rank
Miami	85.1	+1.5	4 th warmest
Fort Lauderdale	84.4	+1.5	6 th warmest
West Palm Beach	84.4	+1.6	5 th warmest
Naples	84.1	+1.8	7 th warmest

Below are August rainfall totals and departure from normal in inches for select south Florida locations:

Location	August 2010 Rainfall	August Departure From Normal and Rank
Miami Int'l	8.75	+0.12
Fort Lauderdale Int'l	11.55	+4.67 (9 th wettest)
Palm Beach Int'l	6.97	+0.32
Naples Regional	7.13	-0.92
Miami Beach	7.77	+2.33 (13 th wettest)
Moore Haven	9.37	+2.57 (20 th wettest)
Golden Gate	14.97	
NWS Miami (FIU Main)	13.23	
Palm Beach Gardens	13.10	
Juno Beach	12.09	

The Redland (Miami-Dade)	11.68	+2.96 (9 th wettest)
Homestead General	10.89	
Hollywood	10.71	+4.69
Marco Island	10.12	
North Miami Beach	9.92	
Brighton Reservation (Glades County)	9.84	
Cooper City	9.72	
Big Cypress Reservation	9.37	
Fort Lauderdale Beach	8.08	
Cape Florida	7.44	
LaBelle	7.42	-0.36
Ortona	6.40	
Canal Point (Palm Beach)	5.87	-0.82
South Bay 15 Miles South	4.32	

Outlook for September

The [Climate Prediction Center's outlook for September](#) calls for equal chances of near, warmer or cooler than normal temperatures across south Florida. CPC's precipitation outlook for September calls for about a 60 percent chance of above normal rainfall.

[La Niña conditions developed in July](#) and are expected to continue through the remainder of the year and into the winter of 2011. More information on La Niña's potential impacts on South Florida's weather this upcoming dry season will be provided in the coming weeks.

September marks the peak of hurricane season in the Atlantic basin, and South Florida is certainly no stranger to hurricanes during the month. September ranks second only behind October as far as number of hurricane strikes per month is concerned, and all persons are advised to make sure that their hurricane kits and plans are prepared and ready to be used in case a storm threatens or impacts our region. Please visit [ready.gov](#) for a full list of hurricane preparedness materials.

For the latest weather conditions, forecasts, warnings, advisories and statements, please visit the National Weather Service Miami-South Florida Forecast Office's web site at <http://www.weather.gov/southflorida>.

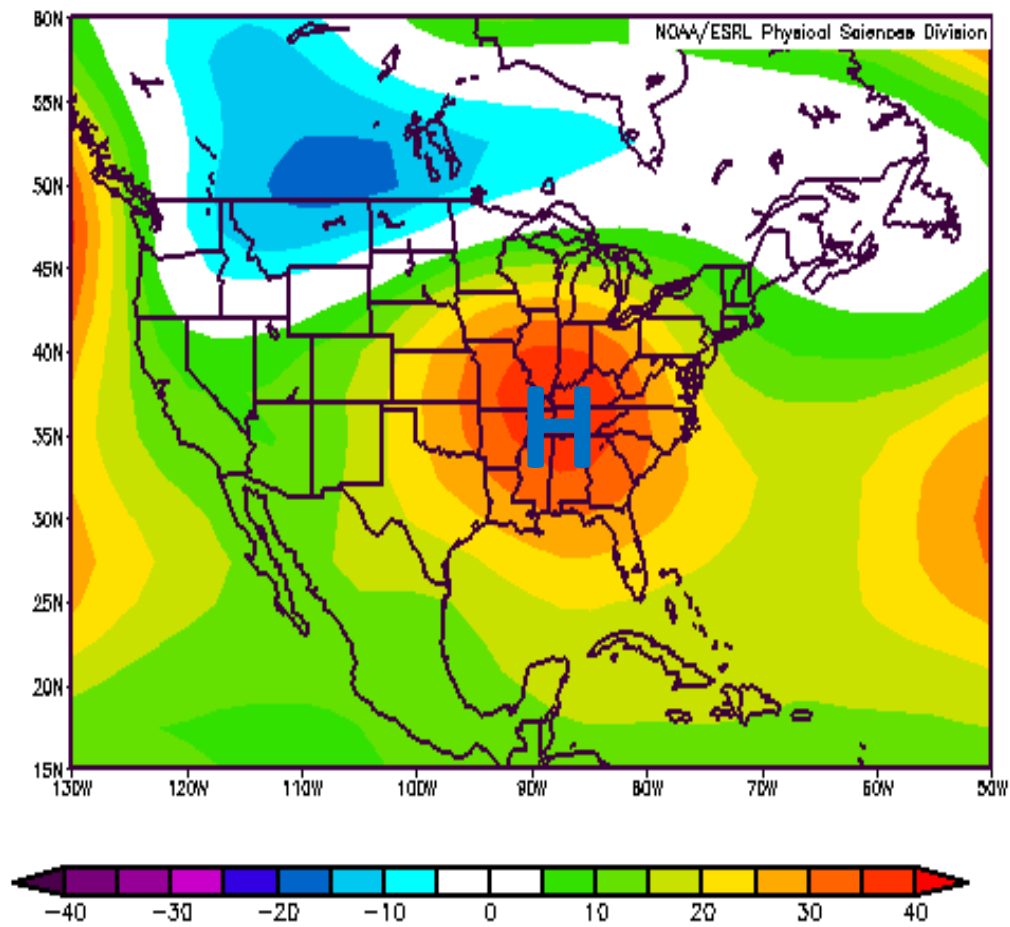


Figure 1: 500 MB Height Anomalies – June 1 through August 28, 2010. Red, orange and yellow areas depict stronger than normal high pressure over most of the eastern half of the United States.

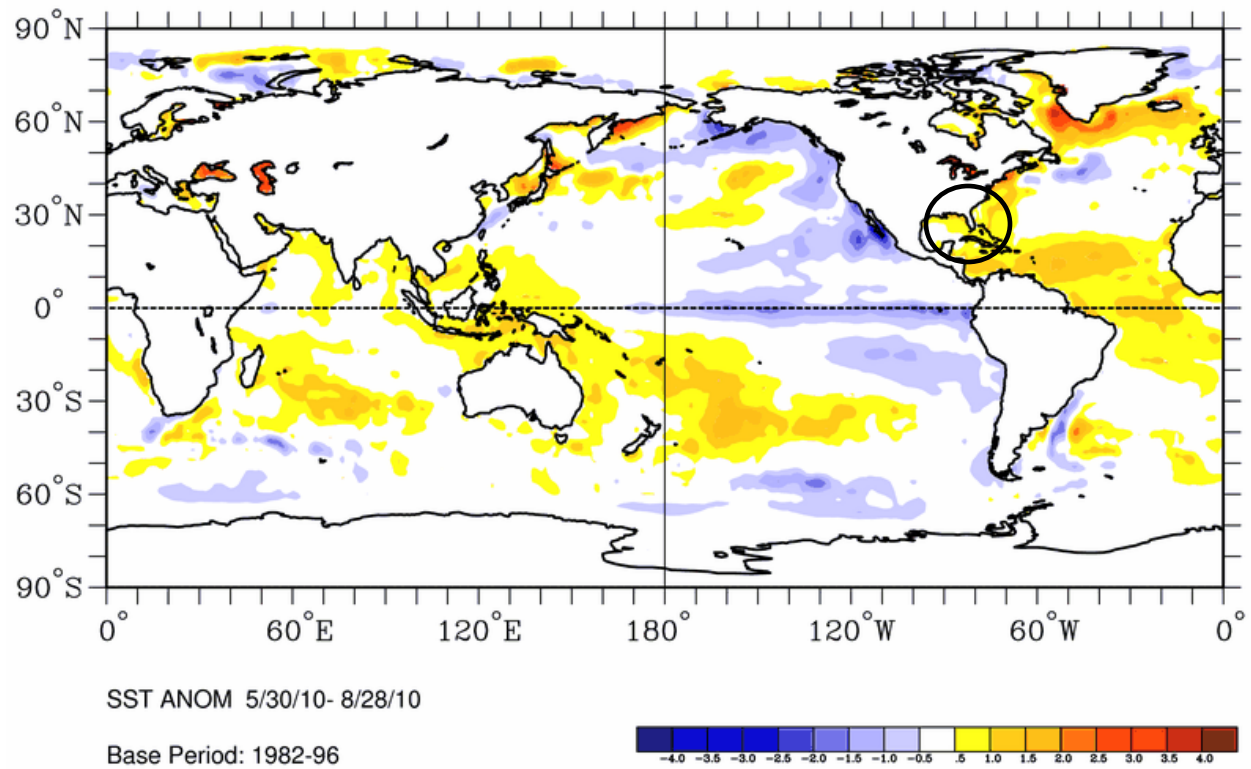


Figure 2: Sea surface temperature departure from normal for period from May 30th to August 28th. Yellow area inside black circle indicates sea surface temperatures of around 1 degree Celsius around the Florida peninsula.

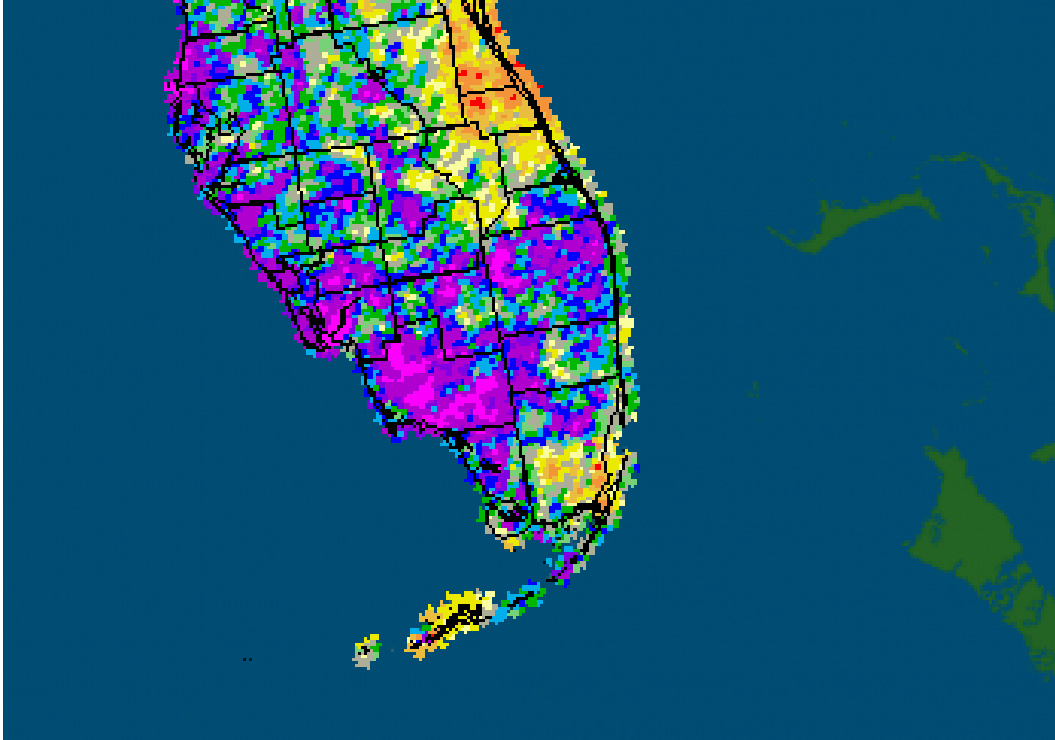


Figure 3: Precipitation departure from normal for August 2010. Green, blue and purple denote areas of above normal precipitation. Yellow, orange and red denote areas of below normal precipitation.